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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/585,178	10/03/2008	Kenneth N. Raymond	061818-02-5009-US	2127

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MORGAN, LEWIS & BOCKIUS LLP (SF)  
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EXAMINER
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JONES, DAMERON LEVEST

ART UNIT	PAPER NUMBER
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1618

MAIL DATE	DELIVERY MODE
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02/04/2011

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/585,178	<b>Applicant(s)</b> RAYMOND ET AL.	
	<b>Examiner</b> D. L. Jones	<b>Art Unit</b> 1618	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 1/10/11 & 6/29/06.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) 3,5,6,11,12,23-35 and 39 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4, 7-10, 13-22, and 36-38 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>7/9/10 &amp; 8/17/09</u> .                                    | 6) <input type="checkbox"/> Other: _____                          |

## **ACKNOWLEDGMENTS**

1. The Examiner acknowledges receipt of the amendment filed 6/29/06 wherein the specification was amended. In addition, the Examiner acknowledges receipt of the amendment filed 1/10/11 wherein claim 11 was amended.

**Note:** Claims 1-39 are pending.

## **APPLICANT'S INVENTION**

2. Applicant's invention is directed to aromatic triamide complexes.

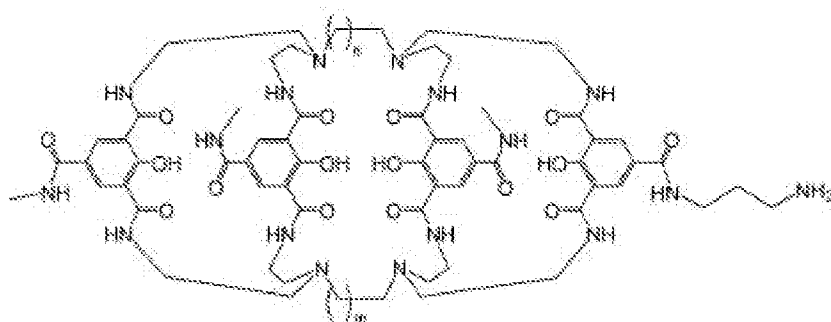
## **RESPONSE TO APPLICANT'S ELECTION**

3. Applicant's election with traverse of Group I (claims 1-22 and 36-38) filed 1/10/11 is acknowledged. The traversal is on the ground(s) that the special technical features possessed by the claimed invention are the triamide or triamine substituted aromatic ring of claim 1. It is asserted that that whether or not the pairs, R1 and R2, R3 and R4, and R5 and R6 are joined to form a ring or not, the special technical feature is shared by all the structures. This is found non-persuasive because (1) unity of invention is lacking because there are multiple categories of invention (i.e., multiple products and multiple uses thereof). For example, compounds wherein at least one of (R1 and R2), (R3 and R4), and (R5 and R6) form a ring are structurally different from species wherein neither (R1 and R2), (R3 and R4), nor (R5 and R6) form a ring. The species may be used for in vitro detection of an enzyme in a sample, determining the effect of a compound on enzyme activity, detecting a target nucleic acid sequence, forming a microarray comprising a chelate and an organic ligand, for radiation therapy, for photodynamic therapy of a lesion, and for amplifying light transmitted by a substrate.

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Thus, as set forth in 37 CFR 1.475, an invention will be considered to have unity of invention if the claims are drawn to one category. The instant invention falls within the boundaries of 5(d) which disclose that if multiple products or uses thereof are claimed, Applicant is entitled to the first invention of the category first mention in the claims and that invention will be considered to be the main invention in the claims. (2) Secondly, unity of invention is lacking because according to 37 CFR 1.475, unity of invention is lacking when the invention lacks a special technical feature that defines a contribution over the prior art. As indicated by the prior art cited below, what Applicant has identified as the special technical feature (the triamide or triamine substituted aromatic ring of claim 1) is not a contribution over the prior art. Hence, the restriction is deemed proper and is made FINAL.

The Examiner acknowledges receipt of Applicant's election of the species



. Claims 1, 2, 4, 7-10, 13-

22, and 36-38 read on the elected species. Initially, Applicant's elected species was search. While no prior art was found, it should be noted that the elected species is rejected under double patenting. The search was expanded to the species of Zumstein (US Patent No. 2,977,332) disclosed below. The search was not further extended because prior art was cited which reads on Applicant's invention.

### **WITHDRAWN CLAIMS**

4. Claims 3, 5, 6, 11, 12, 23-35 and 39 are withdrawn from further consideration by the Examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention/species.

### **DOUBLE PATENTING REJECTIONS**

5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

6. Claims 1, 2, 4, 7-10, 13-22, and 36-38 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-18 of copending Application No. 11/839,509. Although the conflicting claims are not identical, they are not patentably distinct from each other because both sets of claims are directed to compounds having multiple triamine substituted aromatic rings (e.g., see Applicant's elected species and claim 2 of the copending application). Thus, the skilled artisan would recognize that the inventions disclose overlapping species.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

7. Claims 1, 2, 4, 7-10, 13-22, and 36-38 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-8 of copending Application No. 12/020,470. Although the conflicting claims are not identical, they are not patentably distinct from each other because both sets of claims are directed to compounds having multiple triamine substituted aromatic rings (e.g., see Applicant's elected species and claim 3 of the copending application). Thus, the skilled artisan would recognize that the inventions disclose overlapping species.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

## **112 SECOND PARAGRAPH REJECTIONS**

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 1, 2, 4, 7-10, 13-22, and 36-38 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1, 2, 4, 7-10, 13-22, and 36-38: The claims as written are ambiguous because it is unclear what cleavable group(s) and protecting group(s) (see independent claims 1 and 9, lines 10 and 13 respectively) Applicant is/are referring to that are compatible with the instant invention.

Claim 2, lines 6-7: The claim as written is ambiguous because of the phrases 'protected or unprotected reactive functional groups and non-covalent protein binding groups'. In particular, the claim is ambiguous because it is unclear what specific functional groups and protein binding groups Applicant is claiming that are compatible with the instant invention.

Claim 5, lines 6 and 7: The claims are ambiguous because it is unclear what linking member and carrier molecules Applicant is referring to that are compatible with the organic compound being claimed.

Claims 13 and 14: The claim as written is ambiguous because a polymer must comprise multiple subunits, not a single subunit.

Claims 15-18 recite the limitation "the polymer" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim 16: The claim is ambiguous because of the phrase 'pharmaceutical agent'. In particular, it is unclear what type/group of pharmaceutical agents Applicant is referring to that may be appropriate groups for the variable A. Furthermore, a broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 16 recites the broad recitation pharmaceutical agents, and the claim also recites biopolymers, polyamino acids, polyethers, polyimines, polysaccharides, dendrimers, and cyclodextrins which are the narrower statement of the range/limitation.

Claim 16: A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite,



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since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 16 recites the broad recitation biopolymers, and the claim also recites polyamino acids, polyethers, and polyimines which are the narrower statement of the range/limitation.

Claim 19: The claim is ambiguous because the claim is not further limiting since the only component of the chelate is the organic ligand of claim 1. Did Applicant intend to write 'A chelate comprising the compound of claim 1 and a metal ion.'?

Claims 36-38 recite the limitation "the complex" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim 36: The claim is confusing because it is unclear what component of an ink or dye Applicant is referring to that is/are compatible with the instant invention.

Claim 37: The claim is ambiguous because it is unclear what component of a substrate for the transmission and amplification of light Applicant is claiming that is compatible with the instant invention.

Claim 38: The claim is ambiguous because it is unclear what organic and inorganic polymers and combinations thereof Applicant is referring to that are compatible with the instant invention.

## 102 REJECTION

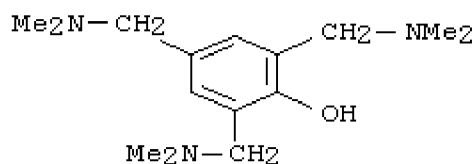
10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. Claims 1 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Zumstein (US Patent No. 2,977,332).

**Zumstein** disclose polymers generated from di- and trimeric fatty acids and aliphatic polyamines (see entire document, especially, columns 1-2 bridging paragraph; column 3, Example 2, column 6, claim 5). In particular, Zumstein disclose 2, 4, 6, tri-(dimethylaminomethyl)-phenol (column 2, line 8) that has the structure:



. Thus, the structure fulfills the requirement of Applicant's invention when Y1 = H2; Y3 = H2, Y2 = H2, a = 1, R1, R2, R3, R4, R5, and R6 = alkyl (methyl), and Q = H. The compositions of Zumstein may contain pigments and amino containing compounds from a polyamine such as triethylene tetraamine,

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dimethylaminopropylamine, or N,N'-tetramethyl-1,3-diaminopropanol (column 2, lines 55-62).

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to D. L. Jones whose telephone number is (571)272-0617. The examiner can normally be reached on Mon.-Fri., 6:45 a.m. - 3:15 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Hartley can be reached on (571) 272-0616. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/D. L. Jones/  
Primary Examiner  
Art Unit 1618

January 29, 2011